carboncycle2.0

CC2.0 LDRD Seminar Series

2pm – 3pm
Thu July 28, 2011
Bldg 15 Rm 253

Biological Soil Crusts: Element Cycling by Earth's Most Extensive Biofilm

Ferran Garcia-Pichel
School of Life Sciences, Arizona State University

Biological soil crusts are extensive but little-known topsoil microbial ecosystems that encompass complete terrestrial carbon cycles. They become biogeochemically relevant under extreme conditions of aridity, where plants falter. They constitute treatable model systems for the integrative deployment of "omics" approaches in search of a mechanistic understanding of microbial community functioning. If successful, this may lead us to an increased explanatory and predictive ability of biogeochemical cycling in the environment. They constitute the main study subject of a recently initiated LDRD at Lawrence Berkeley Lab.

I will review aspects of the basic ecology and microbiology of biological soil crusts, and speak to the potential of these communities as models for integrative carbon cycle research.

Carbon Cycle 2.0 LDRD Seminar Series is a weekly seminar series hosted by Berkeley Lab's Carbon Cycle 2.0 Iniative. Seminars are given by recipients of Laboratory Directed Research and Development (LDRD) awards related to climate and energy. These seminars are open to anyone interested in learning more about the wide variety of Carbon Cycle 2.0-themed research at Berkeley Lab.

BERKELEY LAB
Lawrence Berkeley National Laboratory